CDF Operations Report

Sung-Won Lee

Texas A&M University

CDF Weekly Meeting

Feb 17, 2005

Store Summary

Store	Start Date	Duration [hours]	Inst Lumi Initial E30 cm^{-2} s^{-1}	Int. Lumi Delivered [nb^{-1}]	Live Lumi [nb^{-1}]	Good Run w/o Si w/ Si
3977	2/13	9.2	70.7	1547.5	827.3 54%	42% 42%
3980	2/13	37.2	79.8	3664.3	2848.4 78%	55% 55%
3986	2/16	27.1	60.1	2572.2	1914.8 74%	71% 70%
Total 3977-3986	2/13-1/17	73.5	70.2	7784.0	5590.4 72%	57% 57%

CDF Operations

- 2 Days Supervised Access

  - CMX: East Miniskirt
  - CMP: Oscillating PreAmp
  - BMU: Hot stack on SW
  - Replace Laser Fiber on NW CHA
  - CEM Xenon Flasher Repairs
  - CEM EMTiming Splitter Repairs
  - CES: SMD Crate Fan Repair
  - Silicon Maintenance Works

- 2 Days DAQ system Tests

  - Online DB Oracle Security Patch
  - DSP/Readout Tests
  - Trigger Inhibit Interface Debugging
  - PES/WHA Radioactive Sourcing
  - CHA/WHA Laser Runs
  - SVX Bias Scan
  - Silicon maintenance works

CDF Operations

- Begin Store 3977 (Initial lum 69E30, but small ratio w.r.t. D0 lum)
- High L2A rate and BUSY deadtime 67%. Eventually traced to CMX triggers x10 high. Solved by reseating all TDC boards in CMX crate.
- The Tracer Event ID error problem is back with frequency of occurrence worse than last store when it first appeared.
- Plug HV trip: took about 1 hour from which to recover.
- CLC problem traced to threshold setting. Fixed; luminosity again back to normal with the ratio to D0 at about 1.15.
- Store 3980 scraping complete at 22:36 with init lum = 80.0E30.

Monday, 2/14

- Inherit store 3980
- Installed a version of the SCPU readout that dumps out the entire event for the VRB to get more information to help us understand the TracerEventId errors
- found a hot region in CES/CPR, marked BAD (Run 193913/193914 ~570 nb-1)
- WHA PMT voltages low (~5V low) -> adjusted 1 Gamma HV down by 3V
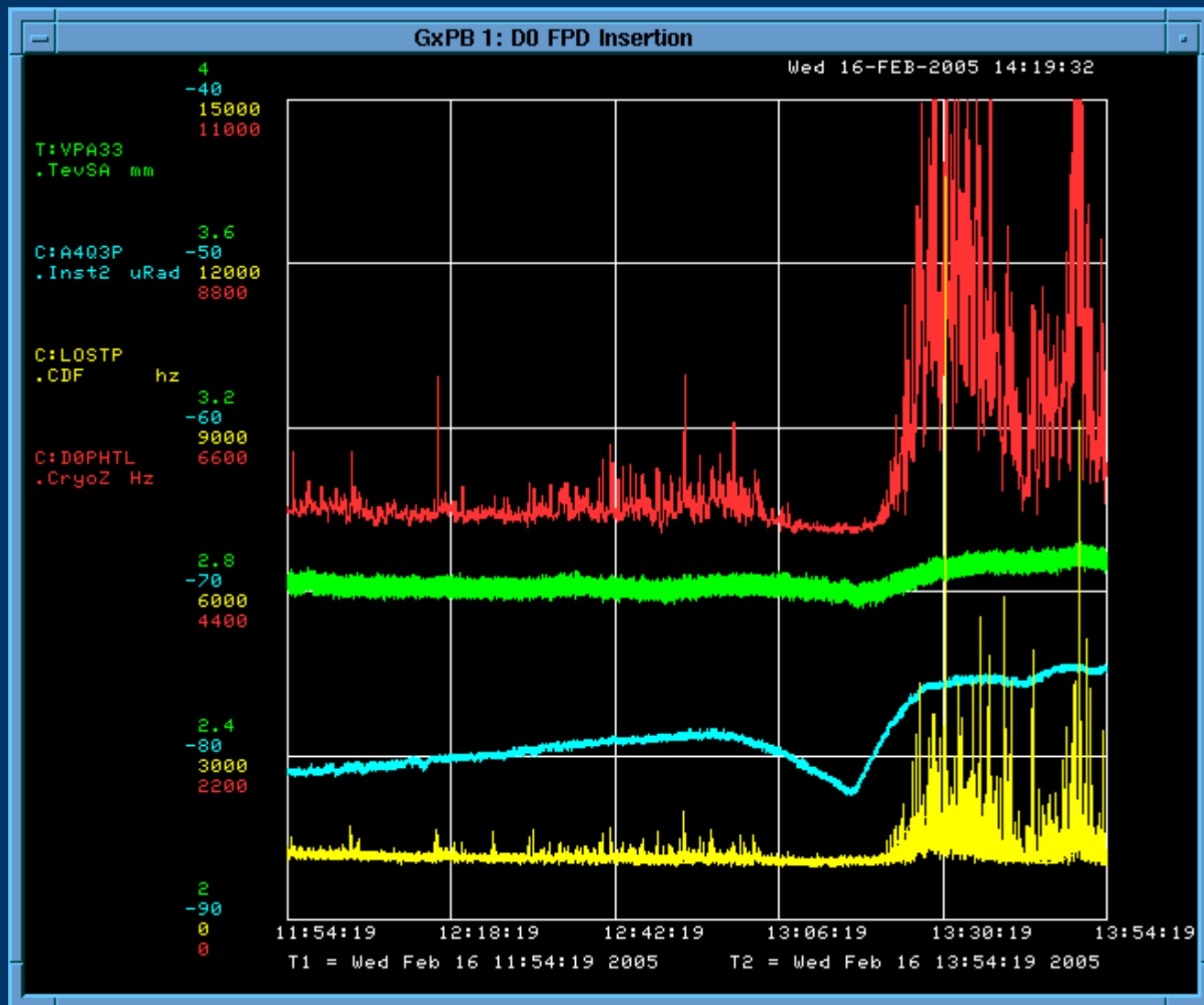- Smooth running afterward; good efficiency

CDF Operations

- Inherit store 3980
- Mostly quite stores with good efficiency
  - Owl shift eff: 97.9% (411.4 nb-1 / 402.6 nb-1)
- "End of Store" tests are done!!
  - Pulsar DAQ readout code test
  - L2 Trigger tests, PHYSICS_3_00[2.576,536], w/o and w/ Silicon
- Store is terminated at 12:06 and follow with Tevatron studies
- Performed a several DAQ tests: Pulsar test, EVB etc..
- Fermi packages of front end readout and run control are updated

Wednesday, 2/16

- Store 3986: Initial lum 60.25E30
- At the beginning of store, Si power supply tripped off [DAQ communication errors]; resulted in ~35 min downtime
- Mostly quite store with good efficiency ~ 80-85% eff.
- High beam losses due to CDF hall temperature changing;
  installed new air shutoff valves outside -> caused some movement in the Q3 low beta magnet on the A4 side, increased CMX SW 9-12 wedges tripped

CDF Operations

- Inherit store 3980
- Mostly quite stores with good efficiency
- Silicon D-mode calibration is done at the end of the store
- Store 3980 is terminated at 9:00
- Re-seat most of SCPUs in VRB crates in attempt to cure recent VRB error problems
- Shot setup is in progress now…